

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
9 September 2005 (09.09.2005)

PCT

(10) International Publication Number
WO 2005/083105 A3

(51) International Patent Classification:
G01N 33/573 (2006.01)

(21) International Application Number:
PCT/EP2005/001420

(22) International Filing Date:
12 February 2005 (12.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
04004326.7 26 February 2004 (26.02.2004) EP

(71) Applicant (for all designated States except US): **BAYER HEALTHCARE AG** [DE/DE]; 51368 Leverkusen (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GOLZ, Stefan** [DE/DE]; Bückmannsmühle 46, 45326 Essen (DE). **BRÜGGEMEIER, Ulf** [DE/DE]; Leysiefen 20, 42799 Leichlingen (DE). **GEERTS, Andreas** [DE/DE]; Schuckertstr. 29, 42113 Wuppertal (DE). **WEINGÄRTNER, Bernhard** [DE/DE]; Birkenweg 4, 42489 Wülfrath (DE).

(74) Common Representative: **BAYER HEALTHCARE AG**; Law and Patents, Patents and Licensing, 51368 Leverkusen (DE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
9 March 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **DIAGNOSTICS AND THERAPEUTICS FOR DISEASES ASSOCIATED WITH GLYCOGEN SYNTHASE KINASE 3 BETA (GSK3B)**

(57) Abstract: The invention provides a human GSK3B which is associated with cardiovascular diseases, cancer, metabolic diseases, hematological diseases, inflammation, respiratory diseases, neurological diseases and urological diseases. The invention also provides assays for the identification of compounds useful in the treatment or prevention of cardiovascular diseases, cancer, metabolic diseases, hematological diseases, inflammation, respiratory diseases, neurological diseases and urological diseases. The invention also features compounds which bind to and/or activate or inhibit the activity of GSK3B as well as pharmaceutical compositions comprising such compounds.



WO 2005/083105 A3